MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

**TRIMESTER 1, 2018 / 2019**

## BSH3044 – OCCUPATIONAL SAFETY AND HEALTH

(All sections / Groups)

20 OCTOBER 2018
2.30 PM – 4.30 PM
(2 Hours)

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**INSTRUCTIONS TO STUDENTS**

1. This question paper consists of **FOUR (4)** pages with **TWO (2)** sections only.

2. Section A: **ONE (1)** Case Study. Attempt **ALL** questions.
   Section B: **FOUR (4)** Structural Questions. Attempt **THREE (3)** questions only.

3. Please write all your answers in the answer booklet provided.

## SECTION A: CASE STUDY (40 marks)

### Ergonomics-related injury cases on the rise

SIBU: The number of cases involving injuries related to ergonomics such as musculoskeletal disorders among workers in the country is increasing.

Citing the Social Security Organisation (Socso)'s statistics, National Institute of Occupational Safety and Health (Niosh) chairman Tan Sri Lee Lam Thye noted that in 2013 alone, the number of ergonomics-related cases reached 694 of the total 2,630 reported cases.

"It means that for every four cases reported to Socso, one is related to musculoskeletal disorders. However, many of these cases are **acute injuries**. If we look at **chronic** musculoskeletal cases, we would find that there are 40 cases (out of 121 occupational disease cases) paid by Socso in 2009. "This number has been rising steadily over the years, where in 2014, 153 out of 605 occupational diseases cases paid by Socso were ergonomics," he told The Borneo Post yesterday.

"For the occupational health issues, previously some of the 'hot issues' were those related to chemical exposure and noise at the workplace. However we find that there is an increasing number of injuries related to **ergonomics** such as **musculoskeletal disorders**." In this regard, Lee also observed that compensations for ergonomics-related diseases are generally higher than those for **other occupational diseases**.

A study conducted by Niosh Ergonomics Centre of Excellence suggests that the cost of permanent disability compensation for occupational disease associated with ergonomics is RM25,313 per case, versus the present's average compensation of RM 22,841 per case, he pointed out. It is also noted that the total amount of compensations had increased from RM1.04 million in 2009 to RM1.94 million in 2014. He attributed this to the collective efforts by Niosh, Department of Occupational Safety and Health (Dosh) and Socso, which were better than they were five or 10 years ago.

"Still, the main issue here is about the prevention of musculoskeletal disorders. He said many people think that ergonomics are only related to 'selecting the best chairs for their workers', training the workers on proper and correct ways to lift good, or having proper seating and standing postures. "In fact, ergonomics itself has many disciplines – the three major ones are **physical ergonomics**, cognitive ergonomics and organisational ergonomics," stressed Lee.

Source: This case is extracted and modified from Peter Boon, (2017). Borneo Post Online. Available at: http://www.theborneopost.com/2017/11/20/ergonomics-related-injury-cases-on-the-rise/ (accessed on: 05.07.2018)

**Continued...**

## QUESTIONS

(a) Relating to the case above, rephrase the meaning of the following terms.

i) Chronic and acute injuries.

(6 marks)

ii) Work related musculoskeletal disorders.

(4 marks)

(b) Name **FOUR (4)** ergonomic risk factors and indicate how these factors can contribute to the injuries.

(10 marks)

(c) Identify the main problem of physical ergonomics and illustrate **FOUR (4)** physical works that are related to physical ergonomics.

(20 marks)

(Total: 40 marks)

**Continued...**

## SECTION B: STRUCTURED QUESTIONS (60 marks)
**Attempt THREE (3) questions only.**

### QUESTION 1
In a textile factory, the remnants of the dyes used for the textile are drained to a huge concrete tank. Between the drain to the tank are few pits. Periodically, the maintenance crews need to descend to the pits for inspection and cleaning purpose.

Assuming you are the head of the maintenance team, how would point out to your team the safety procedures before entering a pit?

(20 marks)

### QUESTION 2
(a) Explain the basic approach to ensure ethical problems are mitigated by using best-ratio approach and black-and-white approach in any organizations. Provide a relevant example for explaining each approach.

(12 marks)

(b) In safety practices, most employees understand the phrase, 'legal does not necessarily mean it is ethical', how would you contrast the differences by defining each term.

(4 marks)

(c) To ensure ethical behaviour among safety committees, you encourage them a daily practice of role-reversal test for routine safety inspections. Illustrate your understanding of this test.

(4 marks)

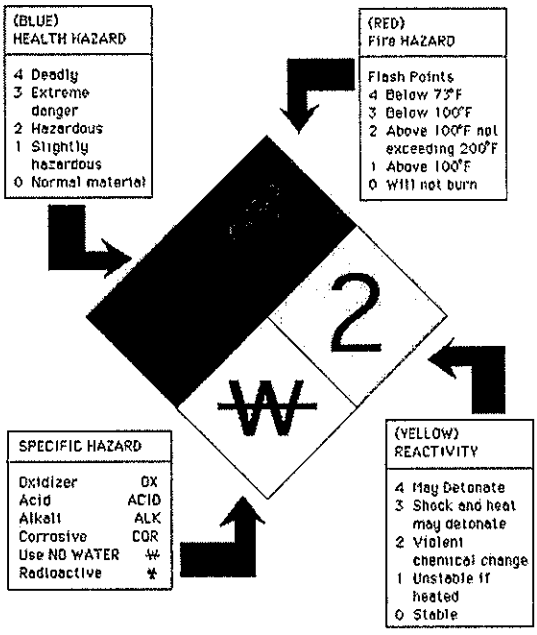
(Total: 20 marks)

**Continued...**

## QUESTION 3

It is common to observe that most manufacturing operators are low skills and illiterate. How would analyse the situations and train a group of five illiterate operators to be responsible for handling chemical with material safety data sheet (MSDS) shown below. What inference can you make that they understand your instructions?

(20 marks)




## QUESTION 4

International Mountain Dew Drinks Sdn. Bhd., is a manufacturing company located in Alor Gajah, Melaka. The company has invited the Chief Minister to officiate the opening ceremony of a new plant.

(a) As an Occupational Safety and Health Manager, describe **FIVE (5)** ways in promoting the importance of safety and health practices in the company.

(10 marks)

(b) Express your understanding of objectivity and consistency of safety rules implemented in the company and how would you demonstrate to the Chief Minister the importance of the safety guidelines during the plant visit. Use relevant examples for your answers.

(10 marks)

(Total: 20 marks)

**End of Paper**